

Table 1. mRNAs that increase or decrease ≥ 4 -fold after HCMV infection

Actin/Tubulin/Myosin			
X06956	alpha-tubulin	24h, 6X	U 3
R59199	est = X79535 - beta tubulin	24h, 4X	U 3
Z24727	tropomyosin isoform	24h, 4X	D 3
T92451	est = M12125 - tropomyosin	24h, 5X	D 3
X05276	fibroblast tropomyosin TM30 (pl)	24h, 4X	D 3
T60155	est = J05192 - alpha-actin (ACTA)	24h, 11X	D 3
M19283	gamma-actin	24h, 4X	D 3
X54163	cardiac troponin I	24h, 5X	D 3
H44011	myosin heavy chain	8h, 5X	D 3
T55741	est = X85337 - myosin light chain kinase (MLCK)	24h, 6X	D 3
X53416	actin-binding protein (filamin) (ABP-280)	24h, 5X	D 1
T97948	neutral calponin	24h, 15X	D 3
Cell Cycle			
L49231	retinoblastoma susceptibility protein (RB1)	24h, 12X	U 3
X59798	PRAD1 mRNA for cyclin	24h, 9X	D 3
D13891	Id-2H	8h, 24h, 6-7X	D 3
L13698	gas-1 (growth-arrest-specific gene)	8h, 24h, 6-15X	D 1
X62048	Wce1 hu	8h, 24h, 4-5X	D 3
H50438	est = M81934 - cdc25B	8h, 4X	D 3
U09477	53BP1 p53-binding protein	8h, 5X	D 3
Coagulation			
R16659	est = L27624 and AC002076 - TFM-2	24h, 8X	U 1
M59499	lipoprotein-associated coagulation inhibitor	8h, 6X	D 3
M14083	beta-migrating plasminogen activator inhibitor 1	24h, 4X	D 3
J02933	blood coagulation factor VII gene	24h, 5X	D 3
Complement			
M31516	decay-accelerating factor (DAF)	8, 24h, 4-5X	U 1
T54547	est = M84526 - adipsin/complement factor D	24h, 7X	D 3
T69603	est = M14058 - complement C1r component	24h, 4X	D 3
R12676	est = M65292 - 1.4-kb mRNA of complement factor H	40', 4X	D 3
Cytokines/Receptors			
M21221	ratnes	8h, 6X	U 2
M29150	interleukin 6	8h, 10X	U 3
X58377	interleukin-11 (IL-11)	8, 24h, 4-11X	U 1
M29696	Interleukin-7 (IL-7) receptor, alpha chain	24h, 4X	U 1
U02020	pre-B cell enhancing factor (PBEF)	8h, 24h, 4X	U 3
T61446	A20	8h, 4X	U 3
L35263	CSAids binding protein (CSBP1)	8h, 7X	D 3
M58286	tumor necrosis factor receptor	8h, 24h, 4-5X	D 1
H14506	est = L36034 - pre-B cell stimulating factor	24h, 4X	D 1
T72012	endoglin	8h, 23X	D 3
Extracellular Matrix and Cell Adhesion			
L36531	Integrin alpha 8 subunit	40', 6X	U 3
M80244	El6, an integral membrane protein	40', 4X	U 3
X14787	thrombospondin 1 (TSP1)	24h, 21X	D 1
L12350	thrombospondin 2 (TSP2)	24h, 13X	D 3
X05231	collagenase	40', 8h, 4-7X	D 3
L25285	collagen alpha-1 type XV (COL15A1)	24h, 13X	D 3
J03464	collagen alpha-2 type I	24h, 14X	D 3
M11718	collagen alpha-2 type V	24h, 8X	D 3
M34570	collagen alpha-2 type VI	24h, 6X	D 3
T51558	est = K01228 - procollagen alpha 1(I) chain	24h, 6X	D 3
X06700	pro-alpha1(III) collagen	24h, 16X	D 1
L16895	lysyl oxidase, an extracellular copper enzyme	24h, 4X	D 3
X53743	fibulin-1 C - a secreted glycoprotein	40', 8, 24h, 5-7X	D 3
U34976	gamma-sarcoglycan, a dystrophin-associated protein	24h, 6X	D 3
U14394	Tissue inhibitor of metalloproteinases-3 (TIMP3)	24h, 6-8X	D 3
R32771	est = U37791 - rasi-1 matrix metalloproteinase	8h, 24h, 5-9X	D 3
U03877	extracellular protein (SI-5)	24h, 4X	D 3
L34056	cadherin-11	24h, 9X	D 3
GTP Binding Proteins			
H67367	est = D38076 - RanBP1 (Ran-binding protein 1)	24h, 5X	U 3
T93295	est: homo. of L20294-mouse GTP-binding protein	24h, 4X	U 3
T75593	rab 13	24h, 9X	D 3
R53966	est = Z22641 - a2-chimaerin	24h, 8X	D 3
H19201	est: homo. to mouse L07924 - gua. nucl. disso. stim.	8h, 9X	D 3
Heat Shock and Stress-Inducible Proteins			
R08183	est = X75821, U07550 - chaperonin 10	24h, 8X	U 3
T66307	heat shock 70kDa protein 1	24h, 11X	U 3
M86752	transformation-sensitive protein	24h, 8X	U 3
L08069	heat shock protein, E. coli DnaJ homologue	8h, 4X	U 3
H55758	est = M14328 alpha enolase	24h, 15X	U 3
T93272	est = M62829 early growth response protein 1	8, 24h, 5-6X	U 1
T51856	est: homo. to stress-inducible chaperone mt-GrpE#1	24h, 4X	U 3
X79066	ERF-1	8h, 4X	D 3
Interferon			
M24594	Interferon stimulated genes 54K (isg54K)	8h, 24h, 5-19X	U 2
M87434	71 kDa 2'5' oligoadenylate synthetase	8h, 6X	U 2
X02875	(2'5') oligo A synthetase E (1.8 kb RNA)	8h, 24h, 6-15X	U 2
X02874	(2'5') oligo A synthetase E (1.6 kb RNA)	8h, 8X	U 2
M87284	69 kDa 2'5' oligoadenylate synthetase	8h, 8X	U 2
X02530	gamma-interferon inducible early response gene	8h, h, 34X	U 1
L05072	Interferon regulatory factor 1 (IRF-1)	24h, 7X	U 2
X15949	Interferon regulatory factor-2 (IRF-2)	8h, 5-12X	U 2
X67325	Interferon-alpha inducible gene; p27 gene	24h, 7-28X	U 2
H05300	Interferon-induced guanylate-binding protein 1	8h, 24h, 9-27X	U 2
M55542	guanylate binding protein isoform II	8h, 9X	U 2
D31887	KJAA0062 (cig19)	8h, 24h, 3-4X	U 2
X82200	interferon inducible gene stat50	24h, 14X	U 1
X02492	Interferon-induced protein 6-16	8h, 24h, 4-5X	U 2
R34698	Interferon-inducible protein 9-27	8h, 24h, 3-6X	U 2
M13755	Interferon-induced 17-kDa/15-kDa protein	8, 24h, 55-260X	U 2
M28622	interferon beta	8h, 24h, 10-31X	U 2
X17668	indoleamine 2,3-dioxygenase	8h, 24h, 9-140X	U 1
M33882	MxA	8h, 24h, 5-118X	U 2
M30818	MxB	8h, 24h, 23-53X	U 2
X56841	HLA-E gene	8h, 24h, 5-19X	U 1
T50250	est: homo. to U51904, mouse IFN α -treated mRNA	24h, 32X	U 1
M60618	nuclear autoantigen Sp100	8h, 24h, 4-16X	U 2
M73778	PML-1	8h, 24h, 3-6X	U 2
Kinase/Phosphatase			
R39857	est = X97630 - serine/threonine protein kinase EMK	24h, 4X	U 3
H02889	est = Y11366 IMPA gene	24h, 8X	U 3
U25994	cell death protein (RIP protein kinase)	8h, 4X	U 1
D21209	protein tyrosine phosphatase (PTP-BAS, type 1)	8h, 24h, 4-6X	D 1
X77278	HYL tyrosine kinase	24h, 8X	D 3
R60908	est = X74764 - receptor protein tyrosine kinase	24h, 21X	D 1
H65441	est = U78027, L35265 - Bruton's tyrosine kinase	24h, 7X	D 3
X16416	proto-oncogene tyrosine-protein kinase (abl)	24h, 4X	D 1
Lamins			
M55210	laminin B2 chain	24h, 4-8X	D 3
X79683	beta2 laminin	24h, 4-5X	D 3
R43734	S78569 - laminin alpha 4 chain	24h, 6X	D 3
T55218	est = M13452 or M13451 - lamin A or C	8h, 26X	D 3
Ligands and Receptors			
L13740	TR3 orphan receptor	8, 24h, 6-46X	U 1
U12767	mitogen induced nuclear orphan receptor	8h, 5X	U 3
M77140	pro-galanin	24h, 20X	U 1
M63888	heparin-binding growth factor receptor	24h, 9X	U 3
T70920	est = M88279 - immunophilin (FKBP52)	24h, 8X	U 3
M20132	androgen receptor (AR)	8h, 4X	D 3
M19481	folistatin	24h, 6-15X	D 1
T71662	est = M14118 - insulin-like growth factor (IGF-II)	24h, 4X	D 3
M35878	insulin-like growth factor-binding protein-3	24h, 4X	D 3
M65062	insulin-like growth factor-binding protein-5	8h, 24h, 4-12X	D 3
M35410	insulin-like growth factor-binding protein 2	40', 8h, 5-11X	D 3
X04434	insulin-like growth factor I receptor	40', 8h, 24h, 4X	D 3
L07594	transforming growth factor-beta type III receptor	8h, 24h, 4-6X	D 3
M21574	platelet-derived growth factor receptor alpha	8h, 24h, 12-25X	D 3
H88938	est = M60828 M25295 - keratinocyte growth factor	8h, 4X	D 3
X62381	activin receptor; growth factor-like receptor	8h, 6X	D 3
R45296	est = U67784 - orphan G protein-coupled receptor	24h, 6X	D 3
X02157	fetal erythropoietin	24h, 4X	D 3
M64497	apolipoprotein A1 regulatory protein (ARP-1)	8h, 4-5X	D 3
L11708	17 beta hydroxysteroid dehydrogenase type 2	24h, 7X	D 3
L00352	low density lipoprotein (LDL) receptor	8h, 24h, 5-6X	D 3
M10065	apolipoprotein E	40', 8h, 7-26X	D 3
Prostaglandin Synthesis			
U04636	cyclooxygenase-2 (cox2)	8h, 7X	U 3
M72393	cytosolic phospholipase A2 (cPLA2)	8h, 24h, 7-12X	U 3
X05908	lipocortin	24h, 9X	D 3
D38145	prostaglandin synthase	24h, 4X	D 3
Protein Degradation			
T56244	est = D26599 - proteasome subunit HsC7-I	24h, 6X	U 3
T54276	proteasome subunit LMP7 (allelic LMP7C)	8h, 4X	U 3
T92259	proteasome component IOTA chain	24h, 5X	U 3
D00762	proteasome component H8	24h, 6X	U 3
D00760	proteasome component C3	24h, 5X	U 3
H05893	26S proteasome subunit p97	24h, 4X	U 3
L02426	26S protease (S4) regulatory subunit	24h, 16X	U 3
M91670	ubiquitin carrier protein (E2-EPF)	24h, 4X	U 3
T67921	est = D55696 - putative cysteine protease	8h, 4X	U 3
T56256	est = U20657 - ubiquitin protease proto-oncogene	8h, 4X	D 3
J03589	ubiquitin-like protein (Gdx)	24h, 7X	D 3
T50500	est = Z22658 - a placental thrombin inhibitor (PTI)	24h, 4X	D 3
Proto-oncogenes			
X89985	BCL7B gene	8h, 24h, 5-10X	U 3
H48122	est = U43746, breast cancer susceptibility (BRCA2)	8h, 4X	U 3
M83751	arginine-rich protein (ARP)	24h, 11X	U 3
M27903	plm-1 proto-oncogene	24h, 16X	U 3
T53138	est = Y11306 - hTGF-4	8h, 4X	D 3
X16416	proto-oncogene tyrosine-protein kinase (abl)	24h, 4X	D 3
D43969	AML1c protein	8h, 24h, 4X	D 3
X82209	MNI	8h, 24h, 4-7X	D 3
Splicing Factors			
X13482	U2 small nuclear ribonucleoprotein A'	24h, 4X	U 3
M15841	U2 small nuclear RNA-associated B'	24h, 4X	U 3
R13349	splicing factor, arginine/serine-rich 7 (SFRS7)	24h, 10X	U 3
Transcription Factors			
R55041	est = J03161 - serum response factor (SRF)	24h, 5X	U 3
H46624	est: homology to mouse AB012276 - ATFx	8h, 4X	U 3
M97676	homeobox protein (HOX7)	8h, 4X	U 3
R26139	est = X59268 - TFIIB	8h, 8X	U 3
M69043	MAD-3, encodes an I kappa B-like protein	8h, 24h, 6-10X	U 3
R26146	NF-kB p105 subunit	24h, 4X	U 3
U09825	acid finger protein (AFP)	8h, 24h, 5-8X	U 3
H88261	est = U90304 Iroquois-class homeodomain protein	8h, 4X	D 3
X03348	beta-glucocorticoid receptor	8h, 24h, 4X	D 3
M83667	NF-IL6-beta protein	8h, 24, 4-6X	D 3
X57435	transcription factor AP-4	8h, 24, 4X	D 3
M36711	sequence-specific DNA-binding protein (AP-2)	8h, 6X	D 3
Y00345	polyA binding protein	24h, 5X	D 3
R39209	est = X65644 - MBP-2 for MHC binding protein 2	24h, 5X	D 3
L19872	aryl hydrocarbon receptor (AHR)	8h, 24h, 4-8X	D 3
Translation Factors			
R72300	est = U17969 - translation initiation factor eIF-5A	24h, 149X	U 3
H04333	est = U49436 - translation initiation factor 5 (eIF5)	24h, 4X	U 3
T69446	est = D13748 - initiation factor 4A-1 (eIF-4A1)	24h, 36X	U 3
L18960	translation initiation factor (eIF-4C)	24h, 39X	U 3
H01943	eukaryotic initiation factor 4E (eIF-4E)	24h, 4X	U 3
X62570	IFP53, tryptophanyl-tRNA synthetase	8h, 24h, 6-800X	U 3
M81592	gamma-glutamyl carboxylase (hGC)	24h, 5X	U 3
Z12830	SSR (signal-sequence receptor) alpha subunit	24h, 5X	D 3
R60357	alanyl tRNA synthetase	8h, 5X	D 3
D31762	KJAA0057 gene - homolog of TRAMP	24, 8X	D 3
Miscellaneous			
M34551	52k autoantigen in Ro/SSA ribonucleoprotein compl.	8h, 24h, 4-12X	U 3
U33286	chromosome segregation gene homolog CAS	24h, 4X	U 3
T88721	est = U51200, X94770 - XMP mRNA	24h, 4X	U 3
M26697	nuclear phosphoprotein B23	24h, 12X	U 3
J05682	subunit C of V-ATPase (vat C)	24h, 8X	U 3

M22349	neuron-specific gamma-2 enolase	24h, 6X	U	3
M24470	glucose-6-phosphate dehydrogenase	8h, 24h, 4-14X	U	3
T47964	purine nucleoside phosphorylase	24h, 8X	U	1
U07681	NAD(H)-specific isocitrate dehydrogenase α subunit	24h, 9X	U	3
R42235	est = X56452 - CYP2C gene for cytochrome P450	24h, 6X	U	1
H53120	est = D12676 - lysosomal sialoglycoprotein	24h, 4X	U	3
J00123	enkephalin gene	24h, 8X	U	3
H28131	est = M64784 - platelet 6-phosphofructokinase	24h, 20X	U	3
R42244	est = X57522 - antigen peptide transporter 1	24h, 6X	U	3
R26294	est = AF017732 - chromosome 2 cosmids	24h, 4X	U	3
L25270	XE169	24h, 4X	U	3
U01833	a putative nucleotide-binding protein	24h, 7X	U	1
H72850	est = X56351 5 - aminolevulinate synthase	8h, 24h, 4X	U	3
U29195	neuronal pentraxin II (NPTX2)	24h, 7X	U	3
U19523	GTP cyclohydrolase I	8h, 24h, 4X	U	1
H03980	est = AB001106 - glia maturation factor	24h, 5X	U	3
L19779	histone H2A.2	8h, 24h, 6-7X	U	3
Z29678	mitF	24h, 4-8X	D	3
X69978	ERCC5 excision repair protein	8h, 5X	D	3
X65024	xeroderma pigmentosum group C compl. factor	24h, 4X	D	3
R60318	est = AF022813 - tetraspan (NAG-2)	24h, 28X	D	3
H87106	est = AF043906 - T245 protein (T245)	24h, 4X	D	3
U14650	platelet-endothelial tetraspan antigen 3	24h, 23X	D	3
L13385	Miller-Dieker lissencephaly protein (LIS1)	24h, 4X	D	3
L35263	CSAids binding protein (CSBP1)	8h, 7X	D	3
D10522	80K-L protein - a major substrate for protein kinase C	8h, 24h, 4-8X	D	1
J02814	chondroitin sulfate proteoglycan core protein	24h, 6X	D	3
X75090	HLA-DR associated protein 1 (PHAP1)	8h, 4-8X	D	3
U08092	histamine N-methyltransferase (HNMT)	8h, 4X	D	3
D14874	adrenomedullin	8h, 24h, 14-18X	D	1
H80262	est = X15422 - mannose-binding protein C	24h, 8X	D	3
R88575	est = U55017 M86521 - transketolase (TKT)	24h, 5X	D	1
M13994	cytosolic aldehyde dehydrogenase (ALDH1)	24h, 5-7X	D	1
M22324	aminopeptidase N/CD13 mRNA	24h, 4X	D	3
M12996	glucose-6-phosphate dehydrogenase (G6PD)	24h, 5X	D	1
T52343	est = Y00433 - glutathione peroxidase	24h, 4X	D	3
T64167	est = dihydriodol dehydrogenase isozyme DD2	8h, 24h, 4-21X	D	3
X58022	corticotropin-releasing factor binding protein	24h, 4X	D	3
U03688	dioxin-inducible cytochrome P450 (CYP1B1)	8h, 24h, 4-11X	D	3
H67764	est = U55764 - estrogen sulfotransferase	24h, 5-12X	D	3
D00137	class I alcohol dehydrogenase beta-1 subunit	8h, 5X	D	3
M77836	pyrroline 5-carboxylate reductase (EC 1.5.1.2)	24, 15X	D	3
T57002	est = M29038 - stem cell protein (SCL)	24h, 4X	D	3
D13665	est = D13665 - osteoblast specific factor 2 (OSF-2p1)	24h, 7X	D	3
M22490	bone morphogenetic protein-2B (BMP-2B)	8h, 4X	D	3
M95787	22kDa smooth muscle protein (SM22)	24h, 5X	D	3
Z11559	iron regulatory factor (IRF)	8h, 24h, 5X	D	3
T63612	ferritin heavy chain	8h, 4X	D	3
T72863	est = M10119 - ferritin light subunit	24h, 287X	D	3
R56881	est = U61166 - Xenopus laevis intersectin homolog	8h, 4-5X	D	3
T63052	est: homolog of M. musculus X52102	24h, 5X	U	3
D14663	KIAA0107 gene	24h, 4X	U	3
R61352	est = D42085 KIAA0095 gene	24h, 6X	U	3
U16954	AF1q	24h, 5-7X	U	3
R98335	est = L13744 AF-9 (unknown function)	8h, 4-5X	U	3
R01072	est: unknown	24h, 5X	U	3
R10664	est: unknown	24h, 5-7X	U	3
H24245	est: unknown	24h, 4-5X	U	3
H11036	est: unknown	24h, 6X	U	3
R42152	est: unknown	24h, 7X	U	3
R74454	est: unknown	8h, 24h, 4X	U	3
R54359	est: unknown	24h, 10X	U	1
R01124	est: unknown	24h, 15X	U	3
R56443	est: unknown	24h, 7X	U	3
T70251	est: unknown	40, 8h, 4X	D	3
H92205	est: unknown	8h, 4X	D	3
T89666	est: unknown	8h, 4X	D	3
H13281	est: unknown	24h, 15X	D	3
R60741	est: unknown	8h, 4X	D	3
H16597	est: unknown	24h, 4X	D	3
R40403	est: unknown	24h, 6X	D	3
H78404	est: unknown	8h, 4X	D	3
T48692	est: unknown	8h, 24h, 6X	D	1
H40677	est: unknown	8h, 6X	D	3
H86071	est: homology to mouse AF003234	8h, 5X	D	3